

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-34 (Canceled).

Claim 35 (New): A threaded tubular connection for a tubular string that is subjected to dynamic bending loads, comprising:

    a male tubular element including a male threaded portion and a female tubular element including a female threaded portion,

    at least one transfer zone axially disposed between the threaded portions and a free end of one of the tubular elements, while being axially spaced from the threaded portions so as to transfer a fraction of at least 20% of bending moment to which the connection is subjected from one element to the other,

    the male and female elements including respective transfer surfaces in mutual contact with a radial interference fit in the transfer zone, at least one of the transfer surfaces being an undulated surface defining a series of annular rounded ribs that come into interfering contact with the facing transfer surface, points of maximum diameter and minimum diameter of the undulation profile being located on respective rounded portions of the profile.

Claim 36 (New): A threaded connection according to claim 35, in which the free end of one of the tubular elements has a front surface free of contact with the other tubular element.

Claim 37 (New): A threaded connection according to claim 35, in which axial length of the transfer zone limits contact pressure resulting from transferring the bending moment to a fraction of the yield strength of the material which is less than 1.

Claim 38 (New): A threaded connection according to claim 35, in which the male and female transfer surfaces are lubricated.

Claim 39 (New): A threaded connection according to claim 35, in which the facing transfer surface is a smooth surface.

Claim 40 (New): A threaded connection according to claim 39, in which the undulated surface is out of contact with the smooth surface between the ribs.

Claim 41 (New): A threaded connection according to claim 35, in which the two transfer surfaces are undulated surfaces.

Claim 42 (New): A threaded connection according to claim 41, in which the ribs of a transfer surface are housed between the ribs of the facing transfer surface.

Claim 43 (New): A threaded connection according to claim 35, in which the undulated surface has a periodic profile.

Claim 44 (New): A threaded connection according to claim 43, in which the periodic profile is asymmetric.

Claim 45 (New): A threaded connection according to claim 35, in which the profile forms part of the male transfer surface and is defined by a first convex rounded portion containing a point with a maximum profile diameter, by a second concave rounded portion

containing a point with a minimum profile diameter and that is tangential to the first rounded portion, and by a third convex rounded portion tangential to the first and second rounded portions and that has a radius substantially larger thereof.

Claim 46 (New): A threaded connection according to claim 45, in which the second rounded portion has a larger radius than the first rounded portion.

Claim 47 (New): A threaded connection according to one of claim 45, in which starting from the free end of the male element, an axial distance between a maximum profile diameter point and the following minimum diameter point of the profile is less than an axial distance between a minimum profile diameter point and the following maximum diameter point of the profile.

Claim 48 (New): A threaded connection according to claim 47, in which the third rounded portion is located between a minimum profile diameter point and the following maximum diameter point of the profile.

Claim 49 (New): A threaded connection according to claim 35, in which the radii of the rounded portions containing the points of maximum diameter and of minimum diameter of the profile are at least equal to 0.4 mm.

Claim 50 (New): A threaded connection according to claim 35, in which the axial distance between two consecutive points of maximum diameter of the profile is at least equal to 1 mm and in which the axial distance between two consecutive points of minimum diameter of the profile is at least equal to 1 mm.

Claim 51 (New): A threaded connection according to claim 35, in which the radial interference fit is substantially constant from one rib to the other.

Claim 52 (New): A threaded connection according to claim 35, in which the radial interference fit is about 0.4 mm in diameter for a nominal threaded element diameter of 177.8 mm.

Claim 53 (New): A threaded connection according to claim 35, in which the transfer surfaces are in mutual metal/metal sealing contact.

Claim 54 (New): A threaded connection according to claim 35, in which a sealing material in a form of a coating or of an added ring is interposed between the metal surfaces of the male and female elements in the transfer zone.

Claim 55 (New): A threaded connection according to claim 35, in which the male and female transfer surfaces or their envelopes form part of tapered surfaces.

Claim 56 (New): A threaded connection according to claim 35, in which the transfer surfaces or their envelopes are inclined with respect to the axis of connection by an angle between 0.5° and 5°.

Claim 57 (New): A threaded connection according to claim 35, in which the undulated surface has a roughness Ra at most equal to 3.2 micrometers.

Claim 58 (New): A threaded connection according to claim 35, in which the transfer zone is axially disposed between the threaded portions and the free end of the female element.

Claim 59 (New): A threaded connection according to claim 58, in which the male transfer surface is adjacent to a regular portion of a great length tube at one end of which the male tubular element is formed.

Claim 60 (New): A threaded connection according to claim 58, in which the facing transfer surface is a smooth surface, and the undulated surface and the smooth surface form part of the male and female elements respectively.

Claim 61 (New): A threaded connection according to claim 58, in which the outer peripheral surface of the female element includes a depression that locally reduces its external diameter facing the transfer zone.

Claim 62 (New): A threaded connection according to claim 61, in which the depression has an axially extending concave curvilinear profile facing the transfer zone and either side thereof, the external diameter being minimal substantially facing a median point of the transfer zone and increasing progressively to either side of the point.

Claim 63 (New): A threaded connection according to claim 62, in which the curvilinear concave profile is connected to a chamfer adjacent to the free end of the female element.

Claim 64 (New): A threaded connection according to claim 62, in which the minimum external diameter is such that the bending inertia of the female element in the plane of the minimum diameter is at least equal to the product of the bending inertia of the regular portion of a great length tube at one end of which the male tubular element is formed and the fraction of the bending moment to be transferred.

Claim 65 (New): A threaded connection according to claim 62, in which the concave curvilinear profile has a radius of curvature of at least 50 mm.

Claim 66 (New): A threaded connection according to claim 35, in which the female element forms part of a short coupling each end of which is provided with a female threaded element that can receive a male threaded element forming part of a great length tube for connecting the two tubes.

Claim 67 (New): A process for improving resistance to fatigue of a threaded tubular connection subjected to dynamic bending loads, the connection including a male tubular element with a male threaded portion and a female tubular element with a female threaded portion, wherein the connection includes at least a transfer zone axially located between the threaded portions and the free end of one of the tubular elements while being axially spaced from the threaded portions so as to transfer from one element to the other element a fraction at least equal to 20% of the bending moment undergone by the connection, the male and female elements having in the transfer zone respective transfer surfaces that are in mutual contact and interfere radially, one at least of the transfer surfaces comprising means for radially spacing the contact locations of the section where the stresses applied to the connection run.

Claim 68 (New): A process according to claim 67, in which the means are in a form of a series of rounded annular ribs.